



Navy Environmental Quality Fact Sheet



Do you want to reduce the water bill for your facility?

Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Reduce water consumption and wastewater disposal. Improve energy efficiency. Media areas are water and wastewater.
- **Improve workers' safety and health.** No change from current operations.
- **Increase productivity.** No change from current operations.
- **Save money.** Reduce water and energy costs.



Low-flow Plumbing Fixtures

Low-flow plumbing fixtures, including showerheads, faucet aerators, and toilets, have been developed that save substantial amounts of water compared to conventional fixtures. Water conservation is essential to mission readiness. Water conservation can be defined as practices, techniques, and technologies that improve water use efficiency. Water conservation projects save money, project a positive image, and help preserve the environment and economy. The US Department of Energy estimates that water use in the federal government exceeds 23 billion gallons a year with costs for water and sewage exceeding \$60 million per year. Plumbing fixtures account for up to 75% of indoor water use, making them prime candidates for water conservation measures. Low-flow showerheads use about 2.5 gallons per minute (gpm) compared to about four and five gpm used by conventional showerheads. Low-flow faucet aerators can cut the water use of faucets from about four gpm to 2.5. Low flow toilets use a maximum of 1.6 gallons of water per flush compare to about 3.5 to 7 gallons of water used by a standard toilet. Replacing a conventional toilet with a 1.6 gpf toilet can reduce toilet water usage by as much as 70% per day! Low-flow plumbing fixtures are available in all styles and colors of conventional fixtures and are available in all parts of the country.

How can you achieve these improvements?

Implement facility-based water conservation measures.

How does this equipment work?

Low-flow plumbing fixtures, such as showerheads, faucet aerators, and toilets, save substantial amounts of water compared to conventional fixtures while providing the same utility.

How will this equipment save you money?

Reduced water use will reduce both water and wastewater related utility costs. Additionally, reducing water consumption may delay or eliminate the need to expand water supply or wastewater treatment facilities. Also, replacing older equipment with newer fixtures will reduce maintenance costs.



How can this technology eliminate or reduce pollution?

Use of low-flow faucets, showerheads, and toilets can significantly reduce facility water consumption and wastewater disposal. Implementation will result in the following pollution reductions:

- Dramatic volume reduction of water use.
- Dramatic volume reduction of waste water discharges to publicly owned treatment works (POTWs).
- Reduction in energy consumption related to water distribution, treatment and heating.

Which facilities can benefit most from this technology?

This technology can be used in all Navy facilities or buildings where conventional plumbing fixtures are located. Applications include:

- Base Housing
- Public and Recreational Facilities
- Industrial and Administrative Facilities

How can this technology reduce regulatory compliance concerns?

This technology allows naval facilities to reduce water consumption and improve energy efficiency. Implementation will result in the following regulatory compliance benefits:

- Helps facilities meet water conservation and usage reduction requirements of the Energy Policy and Conservation Act and Executive Order 13123.
- May help facilities comply with Executive Orders requiring agencies, by 2010 to increase energy efficiency in federal buildings by 35% (based on 1985 usage levels).
- Helps facilities meet NPDES permit conditions.



Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

More information on water conservation techniques and technologies can be found in the *Navy Water Conservation Guide for Shore Facilities, UG-2017-E&U, July 1996* (Web: <http://energy.navy.mil/key-areas/WaterWeb.html>).

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